

WHAT IS CLAIMED IS:

1. A method for managing a list of sectors capable of communication
2 with a subscriber station in a communication system, comprising:
receiving a request to remove a sector from the subscriber station's list;
4 determining a reverse link quality metric from the subscriber station at the
sector; and
6 retaining the sector in the subscriber station's list if said determined
reverse link quality metric is sufficient.

2. The method as claimed in claim 1, wherein said retaining the sector
2 in the subscriber station's list if said determined reverse link quality metric is
sufficient comprises:
4 declining said received request to remove a sector from the subscriber
station's list.

3. The method as claimed in claim 1, wherein said retaining the sector
2 in the subscriber station's list if said determined reverse link quality metric is
sufficient comprises:
4 determining a forward link quality metric at which a rate of data can be
decoded; and
6 setting a forward link quality metric threshold for the sector in accordance
with said determined forward link quality metric.

4. The method as claimed in claim 1, wherein said determining a
2 forward link quality metric at which a rate of data can be decoded comprises:
determining a forward link quality metric at which a minimum rate of data
4 can be decoded.

5. The method as claimed in claim 1 further comprising removing a sector from the subscriber station list if said determined reverse link quality metric is insufficient.

6. The method as claimed in claim 1 further comprising:
determining whether an imbalance exists when the sector is retained in the subscriber station's list; and
transmitting from at least the sector with the highest forward link quality metric a power control command determined in accordance with the highest reverse link quality metric if the imbalance exists.

7. The method as claimed in claim 6 wherein said determining whether an imbalance exists comprises:
measuring at each sector belonging to the list reverse link quality metrics of a subscriber station;
determining at each sector belonging to the list a quality metric of a forward link transmitted by the sector to the subscriber station; and
declaring an imbalance if:
the forward link quality metric of one of the plurality of sectors is greater than a forward link quality of the rest of the plurality sectors by a first threshold; and
said measured reverse link quality metric at the one of the plurality is less than said measured reverse link quality at the rest of the plurality sectors by a second threshold.

8. The method as claimed in claim 1 wherein the communication system comprises the communication system in accordance with IS-856 standard.

9. The method as claimed in claim 1 wherein the communication system comprises the communication system in accordance with IS-95 standard.

10. The method as claimed in claim 1 wherein the communication
2 system comprises the communication system in accordance with wCDMA
standard.

11. The method as claimed in claim 1 wherein the communication
2 system comprises the communication system in accordance with IS-2000
standard.

12. The method as claimed in claim 1 wherein the communication
2 system comprises the communication system in accordance with JSTD-008
standard.

13. The method as claimed in claim 1, further comprising:
2 determining a forward link quality metric from a sector; and
communicating from the subscriber station a request to remove the sector from
4 the subscriber station list if said determined forward link quality metric is
insufficient.

14. An apparatus for managing a list of sectors capable of
2 communication with a subscriber station in a communication system, comprising:
a receiver configured to:
4 receive a request to remove a sector from the subscriber station's
list;
6 a processor communicatively coupled to said receiver; and
a storage medium communicatively coupled to said processor and
8 containing a set of instructions executable by the processor to:
determine a reverse link quality metric; and
10 retain the sector in the subscriber station list if said determined
reverse link quality metric is sufficient.

15. The apparatus as claimed in claim 13, wherein said set of
instructions executable by the processor to retain the sector in the subscriber
station's list if said determined reverse link quality metric is sufficient comprises a
set of instructions to:

decline said received request to remove a sector from the subscriber
station's list.

16. The apparatus as claimed in claim 13, wherein said set of
instructions executable by the processor to retain the sector in the subscriber
station's list if said determined reverse link quality metric is sufficient comprises a
set of instructions to:

determine a forward link quality metric for the sector at which a rate of
data can be decoded; and

set a forward link quality metric threshold in accordance with said
determined forward link quality metric.

17. The apparatus as claimed in claim 13, further comprising:
a second receiver configured to measure a forward link quality metric; and
a second transmitter communicatively coupled to said second receiver
configured to communicate from the subscriber station to a sector request to
remove the sector from the subscriber station list if said determined forward link
quality metric is insufficient.

18. The apparatus as claimed in claim 13 further comprising removing
a sector from the subscriber station list if said determined reverse link quality
metric is insufficient.

19. The apparatus as claimed in claim 1 wherein said set of instructions executable by the processor comprises a set of instructions to:

- determine whether an imbalance exists when the sector is retained in the subscriber station's list; and if the imbalance exists then:
- provide to at least the sector with the highest forward link quality metric a power control command determined in accordance with the highest reverse link quality metric.

20. The apparatus as claimed in claim 6 wherein said set of instructions executable by the processor determine whether an imbalance exists comprises a set of instructions to:

- determine at each sector belonging to the list reverse link quality metrics of a subscriber station;

- determine at each sector belonging to the list a quality metric of a forward link transmitted by the sector to the subscriber station; and

- declare an imbalance if:

- the forward link quality metric of one of the plurality of sectors is greater than a forward link quality of the rest of the plurality sectors by a first threshold; and

- said measured reverse link quality metric at the one of the plurality is less than said measured reverse link quality at the rest of the plurality sectors by a second threshold.

21. The apparatus as claimed in claim 1 wherein the communication system comprises the communication system in accordance with IS-856 standard.

22. The apparatus as claimed in claim 1 wherein the communication system comprises the communication system in accordance with IS-95 standard.

23. The apparatus as claimed in claim 1 wherein the communication system comprises the communication system in accordance with wCDMA standard.

24. The apparatus as claimed in claim 1 wherein the communication system comprises the communication system in accordance with IS-2000 standard.

25. The apparatus as claimed in claim 1 wherein the communication system comprises the communication system in accordance with JSTD-008 standard.

26. A method for power controlling a subscriber station, comprising:
measuring at a plurality of sectors belonging to the subscriber station's list a reverse link quality metrics of the subscriber station;
determining at each of the sectors a quality metric of a forward link transmitted by the sector to the subscriber station;
determining imbalance in accordance with said measured reverse link quality metrics, and said determined quality metrics of forward links; and
transmitting from the sector with the higher forward link quality metric a power control command determined in accordance with the higher reverse link quality metric if the imbalance exists.

27. The method as claimed in claim 24 wherein said determining imbalance in accordance with said measured reverse link quality metrics, and said determined quality metrics of forward links comprises:

declaring an imbalance if:

the forward link quality metric of one of the plurality of sectors is greater than a forward link quality of the rest of the plurality sectors by a first threshold; and

said measured reverse link quality metric at the one of the plurality is less than said measured reverse link quality at the rest of the plurality sectors by a second threshold.

28. The method as claimed in claim 24 wherein said transmitting from the sector with the highest forward link quality metric a power control command determined in accordance with the highest reverse link quality metric if the imbalance exists comprises:

transmitting from the sector with the highest forward link quality metric a power control command determined in accordance with the highest reverse link quality metric if the imbalance exists for a pre-determined time.

29. The method as claimed in claim 24 wherein said measuring at a plurality of sectors belonging to the subscriber station's list a reverse link quality metrics of the subscriber station comprises:

measuring at a two of sectors belonging to the subscriber station's list a reverse link quality metrics of the subscriber station.

30. An apparatus for power controlling a subscriber station, comprising:

a processor communicatively coupled to said receiver; and

a storage medium communicatively coupled to said processor and containing a set of instructions executable by the processor to:

determine at each sector belonging to the list reverse link quality metrics of a subscriber station;

determine at each sector belonging to the list a quality metric of a forward link transmitted by the sector to the subscriber station; and

determine imbalance in accordance with said measured reverse link quality metrics, and said determined quality metrics of forward links: and

provide to at least the sector with the highest forward link quality metric a power control command determined in accordance with the highest reverse link quality metric.

31. The apparatus as claimed in claim 29 wherein said set of instructions executable by the processor to determine imbalance in accordance with said measured reverse link quality metrics, and said determined quality metrics of forward links comprises a set of instructions to:

declaring an imbalance if:

the forward link quality metric of one of the plurality of sectors is greater than a forward link quality of the rest of the plurality sectors by a

first threshold; and

said measured reverse link quality metric at the one of the plurality of sectors is less than said measured reverse link quality at the rest of the plurality sectors by a second threshold.

32. The apparatus as claimed in claim 24 wherein said set of instructions to provide to at least the sector with the highest forward link quality metric a power control command determined in accordance with the highest reverse link quality metric comprises a set of instruction to:

provide to at least the sector with the highest forward link quality metric a power control command determined in accordance with the highest reverse link quality metric if the imbalance exists for a pre-determined time.

33. The apparatus as claimed in claim 24 wherein said list consists of two sectors.